LAPOTYSHKIN, N.M.; SLIVCHANSKAYA, V.V.; KOKAREKO, N.M.; FADEYEV, P.V.; PRAVDINA, T.E.

Rolling electrical steel slabs prepared by continuous casting on strip mills with hot reelers. Biul.TSIICHM no.4:38-40 '61. (MIRA 14:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Lapotyshkin, Slivchanskaya). 2. Novolipetskiy metallurgicheskiy zavod (for Pravdina).
(Rolling (Metalwork))

SOV/137-58-10-20613

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 39 (USSR)

AUTHORS: Levin, A.M., Danilov, P.M., Yeremenko, S.N., Pravdina, T.E.

TITLE: Oxygen, Nonmetallic Inclusions, and Certain Problems of the Technology of Electric Steelmaking (Kislorod, nemetallicheskiye vklyucheniya i nekotoryye voprosy tekhnologii elektroplavki stali)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Chernaya metallurgiya, 1958, Nr 1, pp 55-74

ABSTRACT: Specimens of metal were taken during 13 heats of various steels in 30-t electric-arc furnaces. [O] was determined by the Herty method and by vacuum melting, the nonmetallic inclusions (NI) were determined by electrolytic and metallographic methods. It was established that in low-carbon steels (LCS) [O] at the end of the oxidizing period attains 0.06%, but declines to 0.02% when ready for tapping, and further to 0.01% during tapping. In medium-carbon steels (MCS), [O] was 0.041-0.01% at the end of the oxidizing period and dropped to 0.01% when it was time for tapping. In high-carbon steels (HCS) [O] fluctuates in the vicinity of ~0.01% during the entire heat, and approximates 0.005% when ready for tapping. It is found

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Oxygen, Nonmetallic Inclusions, and Certain Problems (cont.)

that only in the LCS did [O] diminish to less than equilibrium with C during period of Fe-Si and Al deoxidation, while in all other cases it was higher than the values in equilibrium with C. The most pronounced diminution in [O] occurred during the slagging off of the oxidizing and the making of the white slag. Upon deoxidation of the Si, the LCS first displayed a pronounced diminution in [O], which later slowed down or ceased completely, while in MCS a smooth drop in [O] was observed, and in HCS there was no change in [O] in the majority of cases. During tapping there was a pronounced reduction in [O] in the LCS, a less pronounced reduction in MCS, while both decreases and increases in [O] were observed in HCS. On deoxidation, the Si contents of NI in LCS rose on the average from 0.0038 to 0.0288% and then declined to 0.01% at the time of Al addition, subsequently rising to 0.0292%, and declining again to 0.01% during tapping. A similar regularity was also observed in MCS, but in HCS the NI contents fluctuated ~0.007%, did not increase after Si deoxidation, and increased after Al deoxidation to less than 0.01%. The data obtained are taken as good cause for recommendation of intensified deoxidation of the steel at the outset of the reduction period by use of complex deoxidizers and addition of Fe-Si to the slag in addition to Fe-Si, as this makes for a shorter heat. Bibliography: 7 references.

1. Steel--Production 2. Induction furnaces--Operation 3. Steel --Impurities 4. Oxygen--Performance

Card 2/2 A.Sh.

NESMEYANOV, Nik.A.; PRAVDINA, V.V.; REUTOV, O.A.

Reactions of stable arsenic ylides with aldehydes. Izv. AN SSSR. Ser. khim. no.8:1474-1476 '65. (MIRA 18:9)

1. Moskovskiy gosudarstvennyy universitet.

NESMEYANOV, Nik.A.; PRAVDINA, V.V.; REUTOV, O.A.

Arsenic ilides stabilized by acyl derivatives. Dokl. AN SSSR 155 no.6:1364-1367 Ap '64. (MIRA 17:4)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
2. Chlen-korrespondent AN SSSR (for Reutov).

Pravdina, E. L.

Processes on the metal surface during cathode sputtering. [illegible] and [illegible] Pravdina. Bull. Acad. Sci. U.S.S.R., Phys. Ser. 20, 1075-81(1956) (English translation). — See C.A. 51, [illegible]
B. M. R.

PRAVDINA, Ye.K.

SPIVAK, G.V.; TURASOVA, V.Ye.; PRILEZHAYEVA, I.N.; PRAVDINA, Ye.K.

Processes on metal surfaces in cathode sputtering. Izv.AN SSSR.Ser.fiz. 20 no.10:1184-1189 O '56. (MLRA 10:1)

1. Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni M.V.Lomonosova.

(Electron tubes) (Thermionic emission)

USSR/Medicine - Cholinolytics Sep/Oct 53

"Application of Tropacine in the Clinical Treatment of Nervous Diseases," M. B. Eydinova, Ye. N. Prevdina, Clinic of Nervous Diseases, I Moscow Order of Lenin Med Inst

Farmakol i Toksikol, Vol 16, No 5, pp 10-13

Tropacine is a valuable therapeutic agent for the treatment of diseased conditions of subcortical ganglia. It can be used for alleviating pyramidal overstimulation of the muscle tonus. The dosage is 0.025 g 1-2 times per day, depending on the patient's tolerance. If there are disturbances of accommodation, tropacine should be administered at night. The course of treatment is 10 days to 3 mos.

270T46

270T46

PRAVDINA-VINARSKAYA, YE. N. Doc Sand Med Sci -- (diss) " Neuro-logic characteristic of oligophrenia. (Examination of ~~students in the~~ auxiliary school)." Mos, 1957. 12 pp 20 cm. (Min of Health USSR. Central Inst for the Improvement of Profession of Medical Doctors), 200 copies

(KL, 21-57, 107)

LURIYA, A.R. (Moskva); PRAVDINA-VINARSKAYA, Ye.N. (Moskva); YARBUS, A.L. (Moskva)

Mechanisms of eye movements in the process of visual perception and their pathology (Simultaneous agnosia and optic ataxia). Vop. psikhol. 7 no.5:159-172 S-O '61. (MIRA 15:1)
(EYE--MOVEMENTS) (AGNOSIA) (ATAXIA)

[illegible]

[illegible]NOVA, N.S.; PRAZDNIK-VINARSKAYA, Ye.N.

Peculiarities and therapy of residual motor disorders in children [with summary in French]. Zhur.nevr. i psikh. 57 no.7:813-819 '57. (MLRA 10:9)

1. Nauchno-issledovatel'skiy institut defektologii (dir. [illegible] D'yachkov) Akademii pedagogicheskikh nauk RSFSR, Moskva.

(POLIOMYELITIS, therapy,
motor disord. (Rus))

EYDINOVA, M.B.; PRAVDINA-VINARSKAYA, Ye.N.

Method for studying sensitivity in children. Zhur.nevr.i psikh. 60 no.7:778-781 '60. (MIRA 14:1)

1. Nauchno-issledovatel'skiy institut defektologii (dir. A.I.D'yachkov) Akademii pedagogicheskikh nauk RSFSR, Moskva.
(SENSES AND SENSATION)

PRAVDICH-SLADOVICH, N.

YUGOSLAVIA/Organic Chemistry. Synthetic Organic Chemistry. G

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 74038.

Author : V. Hahn, Z. Stojanac, O. Shchedrov, N. Pravdich-Sladovich, S. Tomashich, D. Emer.

Inst :

Title : Amides of Thiopyromucic Acid. Thioamides. Report I.

Orig Pub: Croat. Chem. acta, 1957, 29, No 3-4, 319-327.

Abstract: OCH=CHCH=CCSNRR' / Ia to Ir, in which R = R' = H (Ia); R = H, R' = CH_3 (Ib); R = H, R' = C_2H_5 (Ic); R = H, R' = $C_6H_5CH_2$ (Id); R = H, R' = C_6H_5 (Ie); R = H, R' = 2-$CH_3C_6H_4$ (If); R = H, R' = 3-$CH_3C_6H_4$ (Ig); R = H, R' = 4-$CH_3C_6H_4$ (Ih); R = H, R' = 2-$C_{10}H_7$ (Ii); R = H, R' = 4-$CH_3OC_6H_4$ (Ij); R = H, R' =

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YUGOSLAVIA/Organic Chemistry. Synthetic Organic Chemistry. G

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 74038.

R' = 4-$C_2H_5OC_6H_4$ (Ik); R = R' = C_2H_5 (Il); R = = R' = $H_2C(CH_2)_3CH_2$ (Im); R = CH_3, R' = C_6H_5 (In); R = C_2H_5, R' = C_6H_5 (Io); R = $C_6H_5CH_2$, R' = C_6H_5 (Ip); R = R' = C_6H_5 (Iq), and R = C_6H_5, R' = = COC_6H_5 (Ir) and S-methyl-iso-thioanilide of thiopyromucic acid (II) were synthetized with a view to study their biological properties. Ia to Iq were prepared of corresponding OCH=CHCH=CCONRR'-s (IIIa to IIIq) and P S , and Ir and II were prepared by the action of C H COCl (IV) and (CH) SO (V) on Ie. 22.0 g of OCH=CHCH=CCOCl (VI) is added to 23.2 g of phenetidine in 200 ml of 5%-ual NaOH in 20 min.; 1 hour later it is filtered and IIIk is obtained, yield 81%, melt. p. 130 to 131° (from dilute

Card : 2/7

alcohol). 6 g of VI is added to 8.2 g of benzylaniline in 30 ml of C_5H_5N, the mixture is seasoned 12 hours, after which 40 ml of water is added, the mixture is filtered and IIIp is obtained, yield 91%, melt. p. 111 to 112° (from dilute alcohol). IIIa to IIIq are boiled with P_4S_5 in water-free C_5H_5N, cooled, poured out into a 5 to 10-fold amount of water heated to 50 or 60°, seasoned 12 hours and filtered, and Ia to Iq are obtained. If necessary, Ia to Iq are preliminarily dissolved in 8 to 10%-ual NaOH at heating and filtered, and Ia to Iq are separated with 10%-ual HCl (method A), or the reaction mass is extracted with ether, the extract is washed with dilute HCl and distilled in vacuo (method B). In the following the

YUGOSLAVIA/Organic Chemistry. Synthetic Organic Chemistry. G

Abs Jour: Ref Zhyr-Khimiya, No 22, 1958, 74028.

initial III-s, their amounts in g, boil. p. in °C/mm, melt. p. in °C, amounts of C_5H_5N in ml and of P_2S_5 in g, reaction duration in min., purification method, yield of I in %, its boiling point in °C/mm and its melting point in °C are enumerated: IIIa, 3, -, 141 to 142, 15, 5.7, 40, B, 84, 160 to 162/15, 130 to 131 (from benzene + alcohol); IIIb, 4, -, 62 to 64, 8, 7.1, 40, -, 153 to 157/18, 70 to 71 (from benzene + petroleum ether); IIIc, 17, 136 to 138/15, 34 to 34, 45, 13.6, 45, B, 84, 155 to 160/16, 148 to 150/11, - (liquid, $n^{20}D$ = 1.6236, d_{20} = 1.1629); IIId, 5, 111, -, 15, 2.8, 45, B, 98, -, 49 to 50 (from petroleum ether); IIIe, 10, -, 123 to 124, 20, 7.2, 60, A, 86, -, 107 to 108 (from

Card : 4/7

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 74038.

benzene + petroleum ester), IIIf, 2, 52, 198 to 200/9, 66 to 67 (from benzene + petroleum ether), 5, 1, 11, 40, A, 88, -, 85 to 85.5 (from benzene + petroleum ether); IIIg; 5, -, 86 to 87, 5, 22, 40, A, 67, -, 46.5 to 47 (from dilute CH_3OH); IIIh, 10, -, 108 to 109, 20, 8.8, 45, A, 85, -, 88 to 89 (from benzen + petroleum ether); IIIi, 1, -, 150 to 152, 7.1, 120, A, 84, -, 129.5 to 130 (from dilute alochol); IIIj, 2.17, -, 104 to 105, 5, 0.9, 40, A, 91, -, 129 to 130 (from CH_3OH); IIIk, 10, -, 129 to 130, 20, 7.2, 90, A, 94, -, 80 to 81 (from benzene + petroleum ether); IIIl, 12,134 to 136/18, -, 40, B, 84, 158 to 163/15, 143 to 144/5, - (liquid,

YUGOSLAVIA/Organic Chemistry. Synthetic Organic Chemistry. G

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 74038.

$n^{25}D$ = 1.5960, d_{25}^{25} = 1.1025); IIIm, 10, -, 58 to 59, 20, 13.4, 75; A, 100, -, 55 to 56 (from petroleum ether); IIIh, 3, -, 127 to 128, 10, 3.3, 40, -, 100, -, 70.5 to 71 (from 80%-ual alcohol); IIIp, 4, -, 128 to 129, 15, 4.1, 45, -, 79, -, 85 to 86 (from 90%-ual alcohol); IIIp, 6, -, 109 to 110, 12, 2.5, 60, -, 96, -, 76 to 77 (from alcohol); IIIq, 5, -, 154 to 156, 10, 2.2, 90, A, 57, -, 138 to 139 (from alcohol). 1 g of Ie is dissolved in 10 ml of 10%-ual KOH, 0.7 g of IV is added, crystallized, and Ir is obtained, yield 44%, melt. p. 129 to 129.5° (from alcohol). 3.5 g of V is added to a cooled solution of 2.03 g of Ie in 12 ml of 10%-ual

Card : 6/7

YUGOSLAVIA/Organic Chemistry. Synthetic Organic Chemistry. G

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 74038.

NaOH, heated 30 min. at about 100°, cooled, and II is produced, yield 94%, melt. p. 41.5 to 42° (from 80%-ual alcohol).

Card : 7/7

PRAVDIVTSEV, A.

Soviet exhibition on Ceylon. Vnesh. torg. 29 no.12:30 '59.
(Ceylon--Exhibitions) (MIRA 12:12)

PRAVDIVTSEV, A.

Building in Yangi-Yul'. Sov. profsoiuzy 7 no.14:45 Jl '59.
(MIRA 12:10)

1. Chlen postroykoma g. Yangi-Yul', Uzbekskaya SSR.
(Yangi-Yul'--Construction industry)

LEVIN, E.D.; PRAVDIVYY, I.G.

Methods for using tar acid. Koks i khim. no.9:54-57 '61.
(MIRA 15:1)

1. Magnitogorskiy metallurgicheskiy kombinat.
(Tar acids)

LEVIN, E.D.; PRAVDIVYY, I.G.; NAGINSKAYA, L.V.

Using the head fractions of crude benzene for producing compressed materials. Koks i khim. no.8:44-46 '61. (MIRA 15:1)

1. Magnitogorskiy metallurgicheskiy kombinat.
(Benzene) (Building materials)

LEVIN, B.D.; PRAVDIVYY, I.G.

Improving methods of determining the total sulfur content of liquid products of by-product coking. Koks i khim. no.1:48-49 '60. (MIRA 13:6)

1. Magnitogorskiy metallurgicheskiy kombinat.
(Coke industry--By-products)
(Sulfur--Analysis)

ACCESSION NR: AP4020339 S/0089/64/016/003/0260/0262

AUTHOR: Korzh, I. A.; Kopy*tin, N. S.; Pasechnik, M. V.; Pravdivy*y, N. M.; Skiyar, N. T.; Totskiy, I. A.

TITLE: Scattering of neutrons with energies of 0.5 and 0.8 Mev. in light and intermediate nuclei

SOURCE: Atomnaya energiya, v. 16, no. 3, 1964, 260-262

TOPIC TAGS: neutron scattering, light nucleus, intermediate nucleus, threshold detector, anisotropy, neutron C, Na, Mg, Al, Ni, Cu, Se, Te

ABSTRACT: Measurements of angular distributions of elastically scattered neutrons with energies of 0.5 and 0.8 Mev. in light and intermediate nuclei (C, Na, Mg, Al, Ni, Cu, Se, Te) were completed in 1959 by a method described by M. V. Pasechnik, ("Atomnaya energiya", 16, 1964, 207). A detector was selected as threshold in order to prevent the recording of nonelastic scattered neutrons. Taking this threshold into account, the scattering of neutron energy was ± 50 kev. for both neutron energies so that the results regarding resonances for all tested nuclei may be considered as average. Measurements were conducted for 8

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ACCESSION NR: AP4020339

different angles in a 30-140C interval. In computing differential cross sections of elastically scattered neutrons the non-uniform flux of the neutrons with regard to the volume of the scatterer and length of the detector were considered. Differential cross sections are given depending on the cosine of the scattering angle in the laboratory system of coordinates for neutrons with energy of 0.5 and 0.8 Mev. Statistical errors of measurement are provided. Angular distributions of elastically scattered neutrons indicate that neutron scattering for both energies is anisotropic. Anisotropy for all the nuclei being studied increases during transition of neutron energy from 0.5 to 0.8 Mev. Orig. art. has: 2 figures, 1 table.

ASSOCIATION: None

SUBMITTED: 15Jul63	DATE ACQ: 31Mar64	ENCL: 00
SUB CODE: NP	NO REF SOV: 002	OTHER: 002

Card 2/2

KORZH, I.A.; KOPYTIN, N.S.; PASECHNIK, M.V.; PRAVDIVYY, N.M.; SKLYAR, N.T.; TOTSKIY, I.A.

Scattering of 0.5 and 0.8 Mev. neutrons by light and medium nuclei. Atom energ. 16 no.3:260-262 Mr '64. (MIRA 17:3)

KORZH, I.A. [Korzh, I.O.]; KOPYTIN, N.S. [Kopytin, M.S.]; PASECHNIK, M.V. [Pasichnyk, M.V.]; PRAVDIVYY, N.M. [Pravdyvyi, M.M.]; SKLYAR, N.T. [Sklіar, M.T.]; TOTSKIY, I.A. [Tots'kyi, I.A.]

Elastic scattering of 0.65 Mev. neutrons by atomic nuclei. Ukr. fiz. zhur. 8 no.12:1323-1327 D '63. (MIRA 17:4)

1. Institut fiziki AN UkrSSR, Kiyev.

MIKHAYLOVA, I.G.; PRAZDNIKOV, Ye.V.

Regenerative possibilities of the placenta in white rats and white mice. Arkh. anat. gist.i embr. 38 no.1:31-37 Ja '60. (MIRA 13:7)

1. Kafedra embriologii (zav. - prof.B.P.Tokin) Leningradskogo gosudarstvennogo universiteta im. A.A. Zhdanova. Adres avtorov: Leningrad. Universitet. Biologopochvennyy fakul'tet. Kafedra embriologii.
(PLACENTA) (REGENERATION (BIOLOGY))

TRAVOLYUBOVA A A

USSR/Cultivated Plants - Medicinal, Essential Oil Bearing. H-10
Tuberous.

Abs Jour : Ref Zhur - Biol., No 9, 1958, 39855

Author : Travolyubova, A.A.

Inst : All Union Scientific Research Institute of Synthetic and Natural Aromatic Substances.

Title : The Degree of Oiliness of the Jubilee (Eugenol) Basil Depends on the Plants Developmental Phases in Georgia (USSR).

Orig Pub : Tr. Vses. n.-i. in-ta sintetich. i natural'nykh dushistykh veshestv, 1957, vyp. 3, 67-78.

Abstract : In order to pinpoint the harvesting dates of the jubilee basil, a study of oil accumulation (depending on the phase of plant development) was conducted at the Sukhum experimental experiment station of the AllUnion Institute of

Card 1/3

USSR/Cultivated Plants - Medicinal, Essential Oil Bearing, [illegible]
Diseases.

Abs Jour : Ref Zhur - Biol., No 9, 1954, 38555

Synthetic and Natural Auxinic Substances. It was discovered that during the transition from the budding phase to the fully ripened seeds stage the yield of oil falls from 10.2 to 0.33%. The calculation was made with fresh racemes. The highest yield of oil secreted by the leaves (0.19%) was obtained during the phase of plant development, when the ripening (darkening) of seeds starts in the lower levels of the central inflorescences. The yield of oil gradually increased until this phase is reached. After that, the yield decreases. But even during the last phases of plant development, the yield of oil from the leaves remains high (0.67%). The yield of oil from the whole green mass varies in an identical manner. The minimum total oil yield from the plant (in g) is obtained during the seed ripening stage and when the bracts turn brown in the lower half of the central racemes.

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USSR/Cultivated Plants - Medicinal, Essential Oil Bearing. Poisonous. M-10

Abs Jour : Ref Zhur - Biol., No 9, 1958, 39555

It is possible to obtain two crops of basil under conditions prevailing in Georgia (USSR). -- L.N. Korolev

Card 3/3

PRAVDOLYUBOVA, A.A., kandidat khimicheskikh nauk.

Oil content of Ocimum gratissimum at different stages of development under conditions prevailing in Georgia. Trudy VNIISNDV no.3:67-78 '57. (MLRA 10:9)

(Georgia--Basil) (Eugenol)

HERRMANOVA, K.; HUB, M.; PRAVDOVA, M.

Cushing syndrome with narcolepsy & fatal hemorrhage from peptic ulcer.
Cas. lek. cesk. 96 no.39:1234-1236 27 Sept 57.

1. Katedra interni propedeutiky VLA J. Ev. P., pobocka Pardubice, prednosta dr. Herrman. Pathologickoanatomicke oddeleni KUNZ Pardubice, prednosta Mil. Hub.

(CUSHING SYNDROME, compl.
narcolepsy with fatal hemorrh. from peptic ulcer (Cz))
(SLEEP DISORDERS,
narcolepsy with Cushing synd. & fatal hemorrh. from peptic ulcer (Cz))
(PEPTIC ULCER, Hemorrh.
fatal with Cushing synd. & narcolepsy (Cz))

USSR / Cultivated Plants. Medicinal. Essential Oil-Bearing. Toxins. M-7

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 6491

Author : Pravdolyubova, A. A.
Inst : Sukhumi Zonal Experimental Station
Title : Production of Vetiver No 14 Clones Which Have a High Oil Content Among a Population of East Indian Vetiver

Orig Pub : Tr. Sukhumsk. Zonal'n. opytn. st. efiro-maslichn. kul'tur, 1957, vyp 2, 35-44

Abstract : Clone 14, characterized by high quality and excellent yield of oil (3.5 - 4 on the average and even 6%), was produced at the Sukhumi Zonal Experimental Station of Essential Oil Crops during the study of East Indian vetiver (Vetiveria zizanioides Stapf.). It was established that the content of oil

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USSR / Cultivated Plants. Medicinal. Essential Oil-Bearing. Toxins. M-7

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 6491

in the Soviet subtropics depends not only on the age of plants but on the growth and development of plants during the vegetation period, as well. According to preliminary data, vetiver clone 14 can give 1 - 1.5 t of absolutely dry roots with a yield of oil ranging from 35 to 50 kg/ha upon planting of 20 thousand two year old sets. Perfumes, prepared from the oil of vetiver clone 14 were more rated highly at the Glavparfyumer than those prepared with imported vetiver oil. The station transmitted 23 thousand seedlings of vetiver clone 14 for implanting in production during 1955-1957. Testing of this clone is carried out at the present

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USSR / Cultivated Plants. Medicinal. Essential Oil-Bearing. Toxins. M-7

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 6491

time in Georgia, Krasnodar Kray and in Middle Asia. -- A. G. Vyatkina

Card 3/3

PRAVDUKHIN, V.A.

Investigation of coals from the Karaganda Basin. Trudy IGI 12:105-114 '61. (MIRA 14:3)
(Karaganda Basin--Coal)

PRAVDUKHIN, V.A., kand.tekhn.nauk

Studying the nature of the distribution of mineral inclusions in Karaganda coal. Vest.AN Kazakh.SSR 16 no.7:3-12 Jl '60. (MIRA 13:8)

(Karaganda Basin--Coal)

PRAVDUKHIN, V. A., Cand of Tech Sci — (diss) "Means of Expanding the Raw Material Base of the Coke Industry in the Karagandinskaya Basin," Moscow, 1959, 14 pp (Institute of Fuels, Acad Sci USSR) (KL, 4-60, 120)

PRAVDUKHINA, V.; KAZACHKOVA, R.

Rapid way of determining the shrinkage of hides resulting from salting. Mias.ind.SSSR 32 no.2:18 '61. (MIRA 14:7)

1. Eksperimental'no-proizvodstvennaya laboratoriya Omskogo sovnarkhoza.
(Hides and skins)

CA 17

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

The composition of the essential oils of Pelargonium capitatum No. 24 and Pelargonium roseum No. 29. A. A. Pravdolubova. *Bull. Applied Botany, Genetics, Plant Breeding* (U. S. S. R.), Ser. III, No. 13, 47–9(1936).—A study of the oil of No. 24 and of its parent No. 29 indicates the absence of decylic acid in both of these. This confirms the hypothesis that the decylic acid appears during the hybridization process. J. S. J.

Massoy oil. I. Shigehiro Abe. *J. Chem. Soc. Japan* 58, 246–51(1937).—Steam distn. of bark of *Massoia aromatica* gives 1.8–2.4% oil (n_D^{25} 1.4721, d_{4}^{25} 0.9832, $[\alpha]_D$ −87.1°). The fraction b_4 122.3° has n_D^{25} 1.478, d^{25} 0.9589, $[\alpha]_D$ −97.3°; it is $C_{10}H_{16}O_2$, *massoy lactone* (I), MeEtCHCH₂CHCH₂CH:CH.CO.O. K. K.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

L 17693-63 EWT(1)/EWP(q)/EWT(m)/BDS AFFTC/ASD/ESD-3/APGC Pi-4 RB/JD

ACCESSION NR: AP3005590 S/0049/63/000/008/1278/1284

70

AUTHOR: Vernidub, I. I.; Zhikharev, A. S.; Medaliyev, Kh. Kh.; Pravdun, N. S.; Sulakvelidze, G. K.; Chumakova, G. G.

TITLE: Ice-forming properties of lead iodide aerosols produced by combustion of metallo-iodide compounds

SOURCE: AN SSSR. Izv. Ser. geofizicheskaya, no. 8, 1963, 1278-1284

TOPIC TAGS: aerosol, ammonium iodide, lead iodide, fog, supercooled fog, aqueous fog, cloud chamber, ice crystal

ABSTRACT: The crystallizing effect of PbI_2 aerosols on a supercooled aqueous fog in a cloud chamber has been investigated. The aerosols were produced by the combustion of lead powder and iodine-containing substances (crystalline I, NH_4I, CHI_3, and $O{=}C_6I_4{=}O$). The quantity of ice crystals produced at a fog temperature of -10C is dependent on the material used and ranges from 2.3×10^{11} to 5×10^{12} crystals per gram. An aerosol produced from an NH_4I aerosol is as effective as a pure PbI_2 aerosol obtained by the sublimation of lead iodide in an electric arc. The ice-forming capability of PbI_2 aerosols produced by the combustion of metallo-iodide

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L 17693-63

ACCESSION NR: AP3005590

materials increases with a temperature decrease of the aqueous fog. Aerosols of all the investigated metallo-iodide materials are highly monodispersive: between 53 and 71% of the particles are 0.05—0.15 μ in diameter.. The predominant fraction of particles in an aerosol is dependent on the iodide-containing substance used. Orig. art. has: 2 figures, 2 tables, and 2 formulas.

ASSOCIATION: none

SUBMITTED: 18Dec61 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: AS NO REF SOV: 002 OTHER: 003

Card 2/2

VERNIDUB, I.I.; ZHIKHAREV, A.S.; MEDALIYEV, Kh.Kh.; PRAVDUN, N.S.; SULAKVELIDZE, G.K.; CHUMAKOVA, G.G.

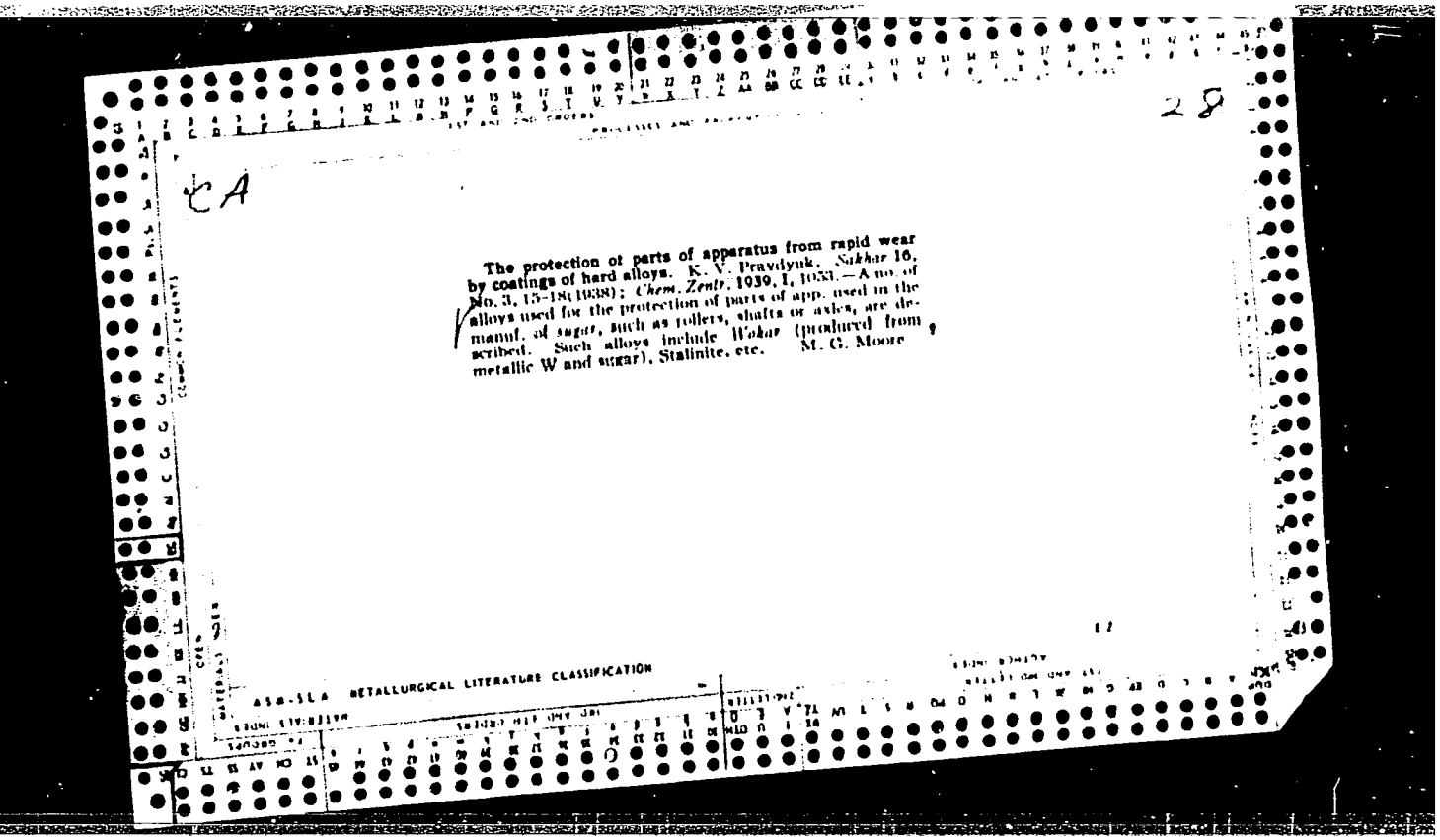
Ice-making properties of lead iodide aerosols, obtained by burning up the metal iodide compounds. Izv. AN SSSR. Ser. geofiz. no.8: 1278-1284 Ag '63. (MIRA 16:9)

1. Predstavleno chlenom redaktsionnoy kollegii Izvestiy AN SSSR, Seriya geofizicheskaya, L.M.Levinym.
(Lead iodide) (Aerosols--Thermal properties)

VERNIDUB, I.I.; ZHIKHAREV, A.S.; MEDALIYEV, Kh.Kh.; PRAVDUN, N.S.; SULAKVELIDZE, G.K.; CHUMAKOVA, G.G.

Study of the ice-forming ability of aerosols of lead iodide. Izv. AN SSSR. Ser. geofiz. no.9:1286-1293 S '62. (MIRA 15:8)

1. Vysokogornyy geofizicheskiy institut AN SSSR.
(Weather control) (Lead iodide)

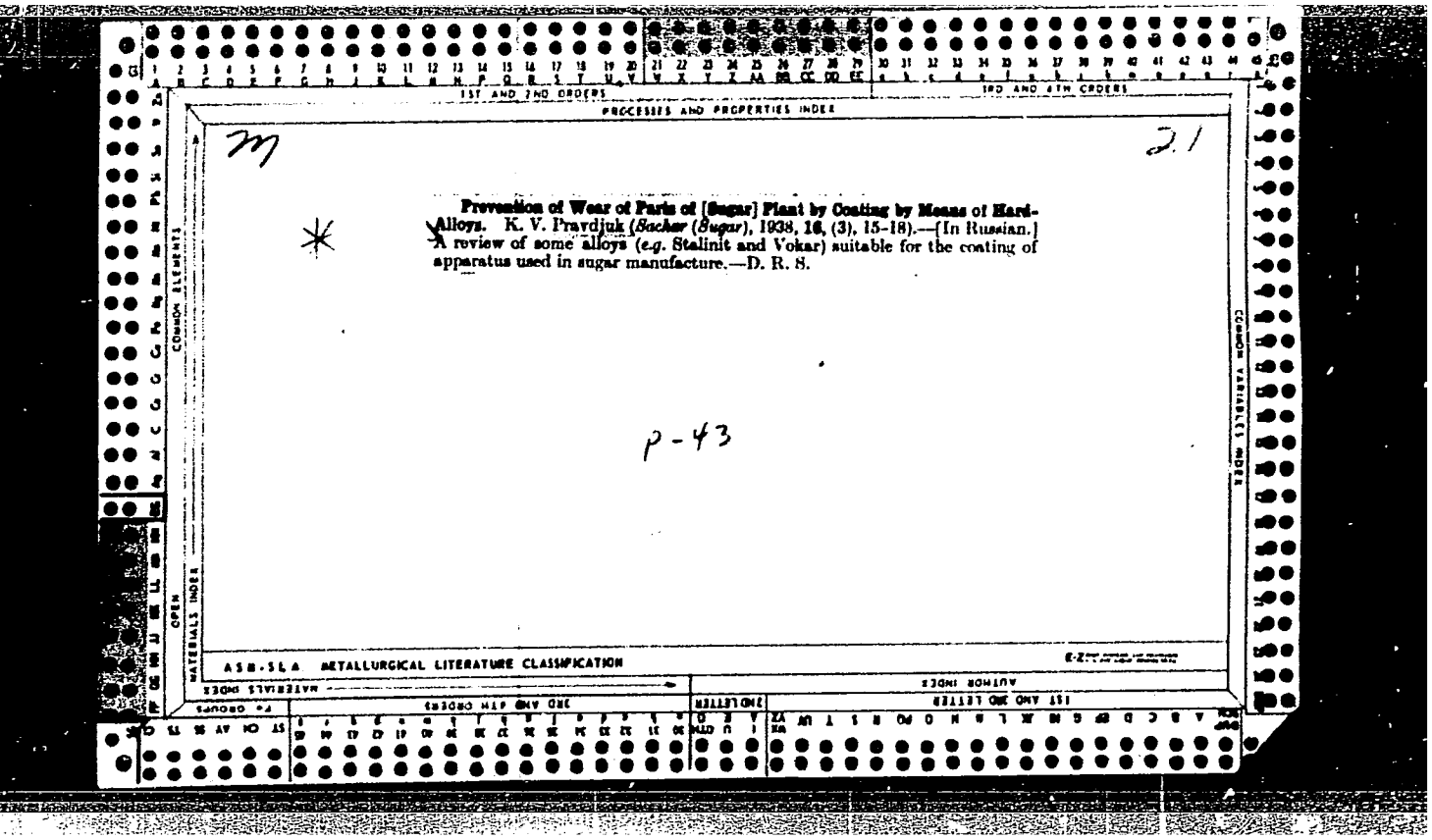


CA

28

The protection of parts of apparatus from rapid wear by coatings of hard alloys. K. V. Pravdyuk. *Sakhar* 16, No. 3, 15–18(1938); *Chem. Zentr.* 1939, I, 1033.—A no. of alloys used for the protection of parts of app. used in the manuf. of sugar, such as rollers, shafts or axles, are described. Such alloys include *Wakar* (produced from metallic W and sugar), Stalinite, etc. M. G. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

M

21

Prevention of Wear of Parts of [Sugar] Plant by Coating by Means of Hard-Alloys. K. V. Pravdjuk (*Sachar* (*Sugar*), 1938, 16, (3), 15–18).—[In Russian.] A review of some alloys (*e.g.* Stalinit and Vokar) suitable for the coating of apparatus used in sugar manufacture.—D. R. S.

P-43

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

LIKHACHEVA, T.V., inzh.; PRAVDYUK, A.D., inzh.; KUSTOV, A.P., inzh.; PAVLOVSKAYA, K.K., inzh.

Protective and ornamental chromium plating of small parts by pouring. Mashinostroenie no.4:77-81 Jl-Ag '65. (MIRA 18:8)

KRAT, V.A.; KRAT, T.V.; PRAVDYUK, L.M.

Physical nonhomogeneity of the solar chromosphere. Izv. GAO 20 no.3:60-66 '56. (MIRA 13:5)
(Sun)

KRAT, V.A.; KRAT, T.V.; PRAVDYUK, L.M.

The K, H, and H_ϵ lines in the spectrum of the solar chromosphere

Izv.GAO 20 no.5:1-11 '58. (MIRA 13:5)
(Spectrum, Solar)

80402

SOV/169-59-4-4040

3.1540

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 4, p 123 (USSR)

AUTHORS: Krat, V.A., Pravdyuk, L.M.

TITLE: Hot Zones of Helium Excitation in the Solar Photosphere

PERIODICAL: Izv. Gl. astron. observ. v Pulkove, 1958, Vol 20, Nr 6, pp 55-60 (Engl. Res.)

ABSTRACT: By observing the D_3 line in the absorption on the solar disk, it was established that excitation zones ("helium"zones) are present in the solar photosphere. The temperature can amount to 70,000°C in these zones. A weak D_3 line with an equivalent width (ω) of about 6 mÅ may be observed in the absorption spectrum throughout the solar disk. Basically, this line originates in the chromosphere and not in the photosphere. For confirming the latter, two arguments are adduced: 1) the absence of considerable radial velocities in the "helium" zones, and

Card 1/2

SOV/169-59-4-4040

Hot Zones of Helium Excitation in the Solar Photosphere

2) the high electron concentration (n_e) amounting to 10^{15}. The "helium" zones can coexist in temporary equilibrium with the surrounding unexcited photosphere only provided that a magnetic field of an intensity of H $>$ 100 gauss exists.

Authors' résumé

Card 2/2

Pravdyuk, L.M.

S/035/60/000/01/06/008

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 1, pp. 55-56, # 425

AUTHOR: Pravdyuk, L. M.

TITLE: On Light Scattering in the Chromosphere by Hydrogen Atoms (From Chromospheric Hβ-line)

PERIODICAL: Izv. Gl. Astron. observ. v Pulkove, 1958, Vol. 21, No. 3, pp. 19-23 (Engl. summary)

TEXT: The author investigated the distribution of hydrogen atoms in the second quantum state over the height h above the photosphere level. Four spectrograms of the chromosphere were obtained by means of the Pulkovo horizontal solar telescope, and on their basis, profiles of the Hβ-line were plotted. The shape of the profiles warrants the conclusion that Hβ emission is due to scattering of light. This necessitates taking into account the effect of the absorption line profile. The value of selfabsorption coefficient, reducing the equivalent line width, was determined from the profiles obtained and the tables presented by V. M. Sobolev (RZhAstr., 1959, No. 4, # 2832), and then the values of N_2 and N_4

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S/035/60/000/01/06/008

On Light Scattering in the Chromosphere by Hydrogen Atoms (From Chromospheric H/β-line)

were calculated for different h (it was assumed that equivalent width decreases with height according to an exponential law). Distortions due to fluctuations of the Sun's image were taken into consideration. The results of calculations are cited in a table. There are 5 references.

E. Ye. Dubov

V/B

Card 2/2

KRAT, V.A.; PRAVDYUK, L.M.

Appearance of nonthermal continuous emission in the solar atmosphere.
Izv.GAO 23 no.2:17-27 '63. (MIRA 16:12)

ACCESSION NR: AT4012198 S/2797/63/023/002/0017/0027

AUTHOR: Krat, V. A.; Pravdyuk, L. M.

TITLE: Appearance of nonthermal continuous emission in the solar atmosphere

SOURCE: Pulkovo, Astron. observ. Izvestiya, v. 23, no. 2 (173), 1963, 17-27

TOPIC TAGS: astronomy, sun, nonthermal emission, chromosphere, chromospheric flare, Fraunhofer line, radiation, radiation density, solar physics, Balmer line, continuous spectrum, solar prominence, bremsstrahlung, synchrotron radiation, thermal radiation, flocculus, solar activity, absorption line, photosphere, hydrogen emission, excitation mechanism

ABSTRACT: An unusual chromospheric flare, accompanied by intense emission in the continuous spectrum, was observed in the region of a bright prominence near the east limb of the sun ($\varphi = -15^{\circ}, \lambda = 133^{\circ}$) on 30 August 1958. The spectral regions of the H_8, H_9, H and K, $H\gamma$, D_3 and $H\alpha$ lines have been studied. The Fraunhofer metal lines do not show any variations in the emission zone. The strong diffusion of emission core images indicates a considerable optical depth of the emission sources, since the greater part of the radiation of the emission core is scattered and reradiated in the photosphere. The effective optical depth of the cores in the direction along the solar radius is $\tau \approx 0.3$. Of the four

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ACCESSION NR: AT4012198

emission bands observed (two bands on each pair of plates); one is due to electron bremsstrahlung, another to synchrotron radiation and two to thermal radiation, which undoubtedly was initially either bremsstrahlung or synchrotron radiation (the latter two cores apparently were at a greater depth than the first two). The thermal radiation corresponds to a spectrophotometric temperature of about 6000°. The appearance of short-lived synchrotron radiation with an attentuation time of less than one minute indicates that at the place of its development the field strength is $H \approx 60$ oersteds. The H and K lines above the entire group of emission cores form a bright extended flocculus. If the absorption line was not at the center of the line profile the flocculus would be twice as bright as the continuous background. An evaluation of the CaII concentration reveals that a flocculus develops in the chromosphere above emission cores. Radiation of the deeper layers is screened completely. In the wings of the $H\gamma$ and $H\alpha$ lines no deviations from the profiles of these lines are noted in the undisturbed photosphere. It is possible that they are compensated by the continuous emission spectrum. In the central Doppler core of the Balmer lines there is an appreciable increase of absorption, corresponding to an increase in the number of hydrogen atoms in the second energy level by a factor of at least two. This requires an increase in radiation temperature (corresponding to the given radiation density) of only 300-500°. The difference in the behavior of the H and K lines can be attributed to a gas electron temperature not exceeding 6000°. Under these conditions the excitation of atoms

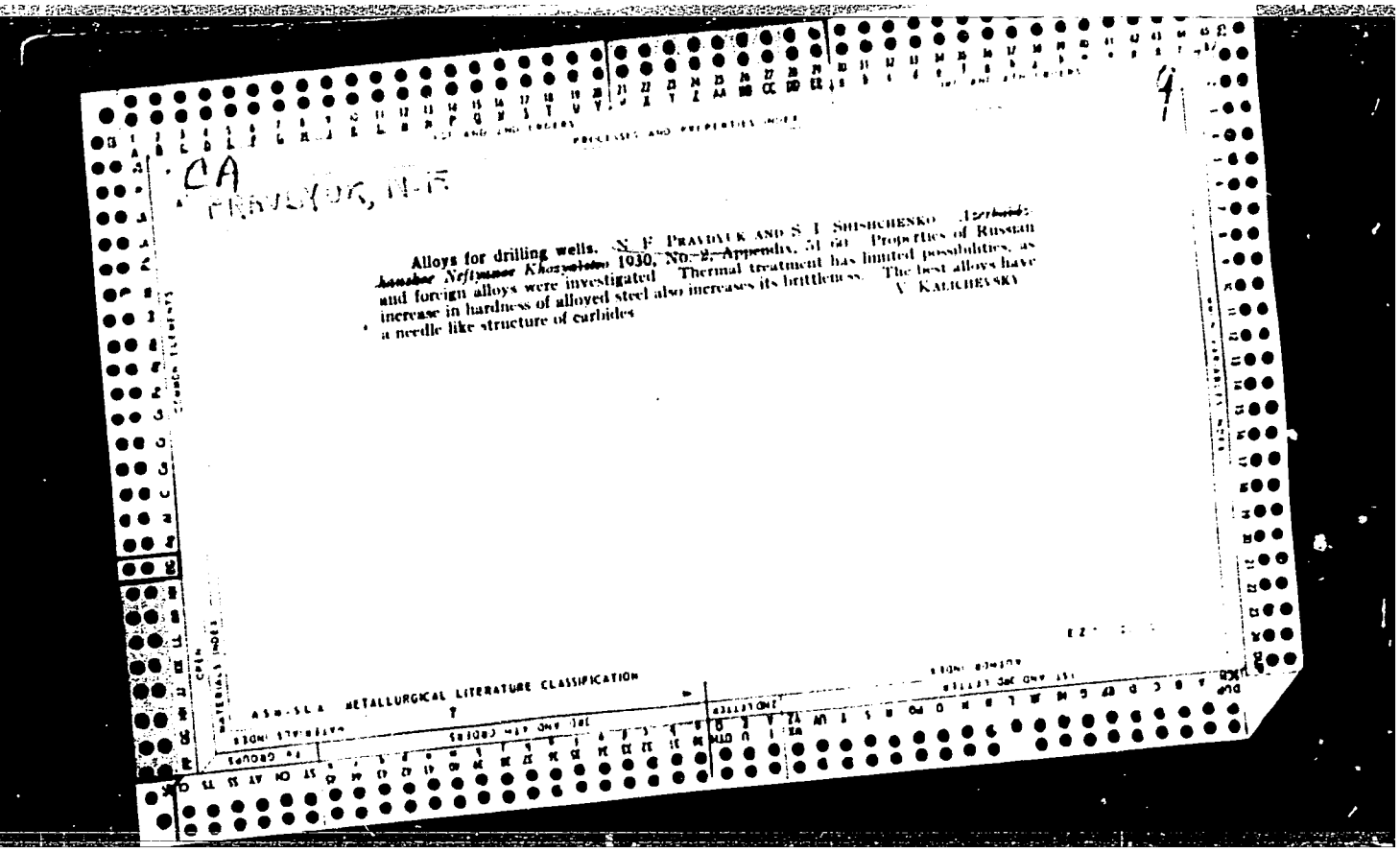
ACCESSION NR: AT4012198

by electron collisions is effective for CaII, but not for hydrogen, whose atoms are excited from the second level by photospheric radiation. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: GLAVNAYA ASTRONOMICHESKAYA OBSERVATORIYA, PULKOVO (Main Astronomical Observatory)

SUBMITTED: 00	DATE ACQ: 27Feb64	ENCL: 00
SUB CODE: AS	NO REF SOV: 006	OTHER: 002

Card 3/3



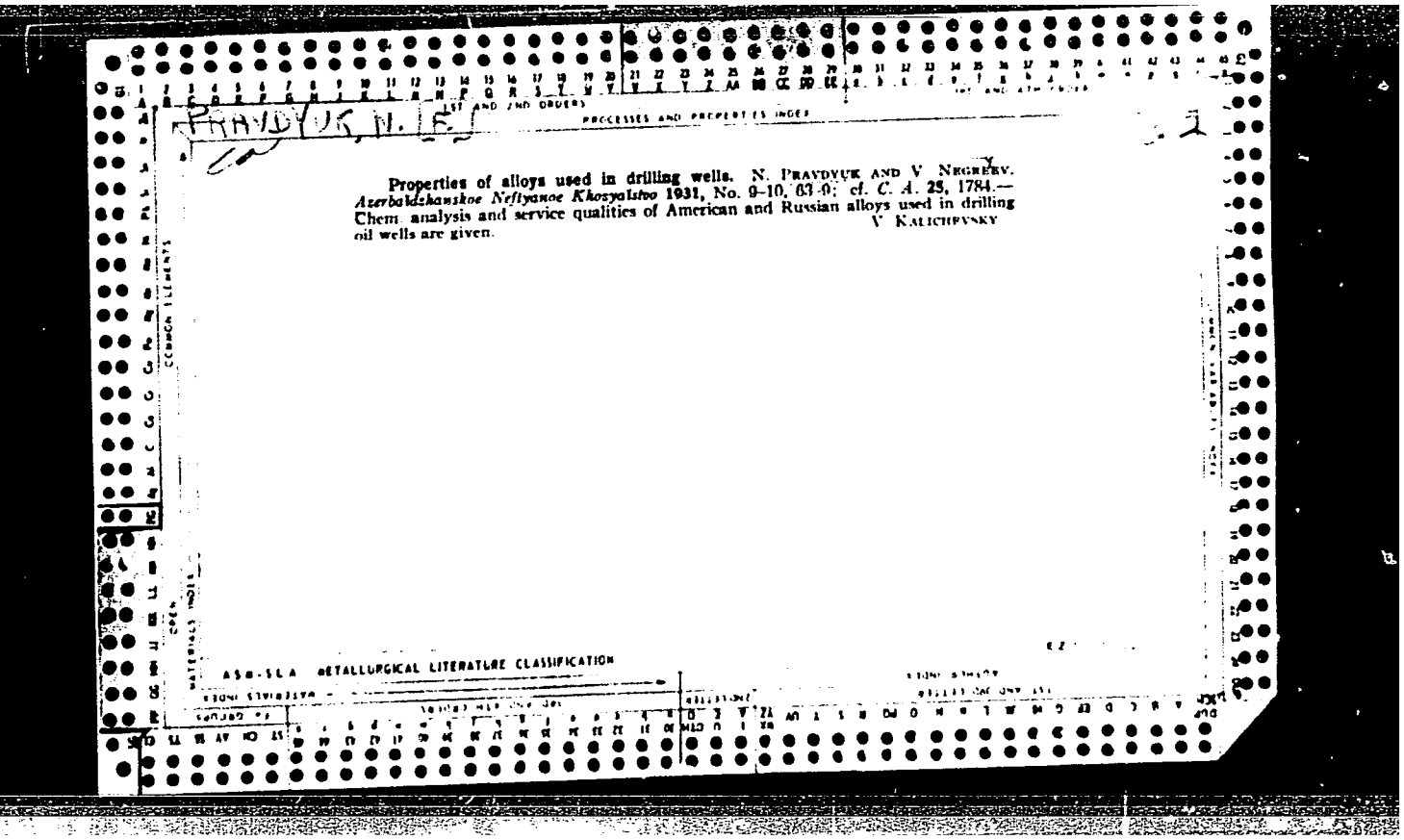
CA

PRAVDUK, N.F.

Alloys for drilling wells. N. F. PRAVDUK AND S. I. SHISHCHENKO. *Azerbaid. Neftyanoe Khozyaistvo* 1930, No. 2, Appendix, 51-60. Properties of Russian and foreign alloys were investigated. Thermal treatment has limited possibilities, as increase in hardness of alloyed steel also increases its brittleness. The best alloys have a needle like structure of carbides.

V. KALICHEVSKY

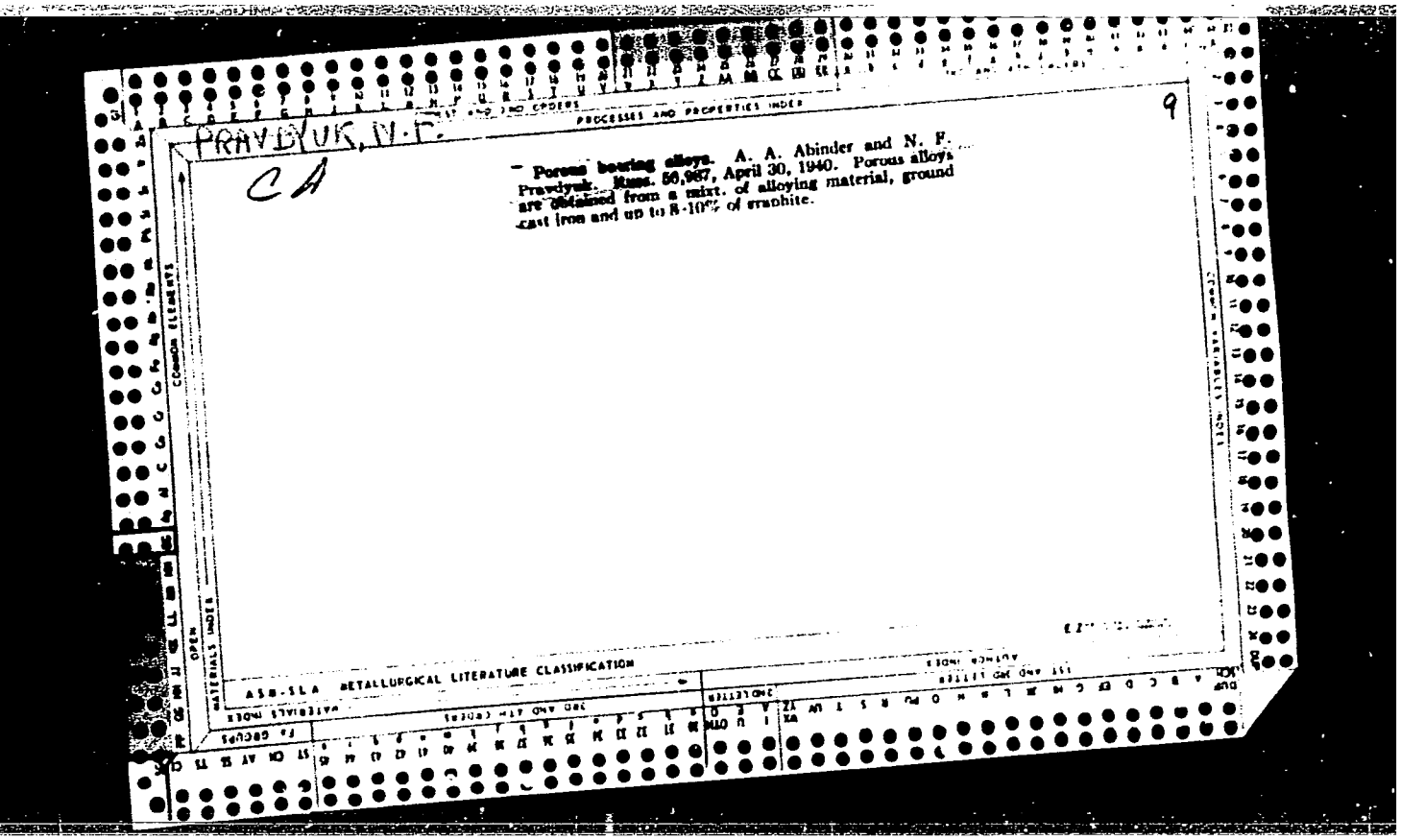
METALLURGICAL LITERATURE CLASSIFICATION



PRAVDYUK, N. F.

Properties of alloys used in drilling wells. N. Pravdyuk and V. Negreev. *Azerbaidzhanskoe Neftyanoe Khozyaistvo* **1931**, No. 9–10, 63–9; cf. *C. A.* **25**, 1784.—Chem. analysis and service qualities of American and Russian alloys used in drilling oil wells are given.

V. Kalichevsky



PRAVDYUK, N. F.

CA

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PROCESSES AND PROPERTIES INDEX

— **Porous bearing alloys.** A. A. Abinder and N. F. Pravdyuk. Russ. 50,987, April 30, 1940. Porous alloys are obtained from a mixt. of alloying material, ground cast iron and up to 8-10% of graphite.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PRAVDYUK, N. F. and D. I. SHMUKLER

Praktika naplavki tverdymi splavami bystroiznashivaiushchikhsia detalei promyshlennogo oborudovaniia. Moskva, Metallurgizdat, 1943. 125 p. illus.

Practice of fusing quick-wearing parts of industrial equipment by means of hard alloys.

DLC: TS227.P68

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

KONOBEYEVSKII, S.T.; KUTAYTAEV, V.I.; PRAVDYUK, N.F.

[Effect of radiation on the structure and properties of construction materials] Vliianie obluchenila na strukturu i svoistva konstuktsionnykh materialov; doklady, predstavlennye SSSR na Mezhdunarodnuiu konferentsiiu po mirnomu ispol'zovaniiu stomnoi energii. Moskva, 1955. 10 p. (MLRA 9:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Konobeyevskiy)
(Building materials) (Radiation)

KONOBEYEVSKIY, S.T.; PRAVDYUK, N.F.; KUTAYTSEV, V.I.

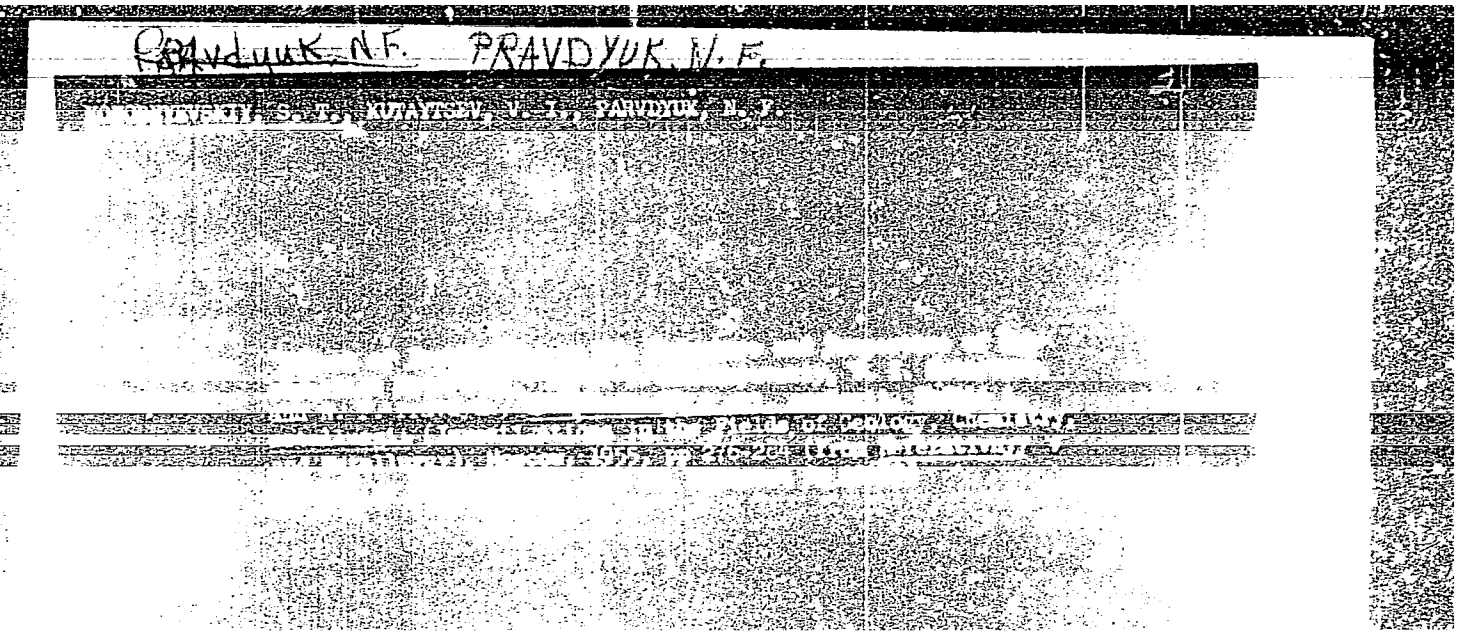
[Effect of radiation on the structure and properties of fissionable materials] Vliianie obluchenila na strukturu i svoistva deliashchikhsia materialov. Moskva, 1955. 14 p. (MIRA 14:6)

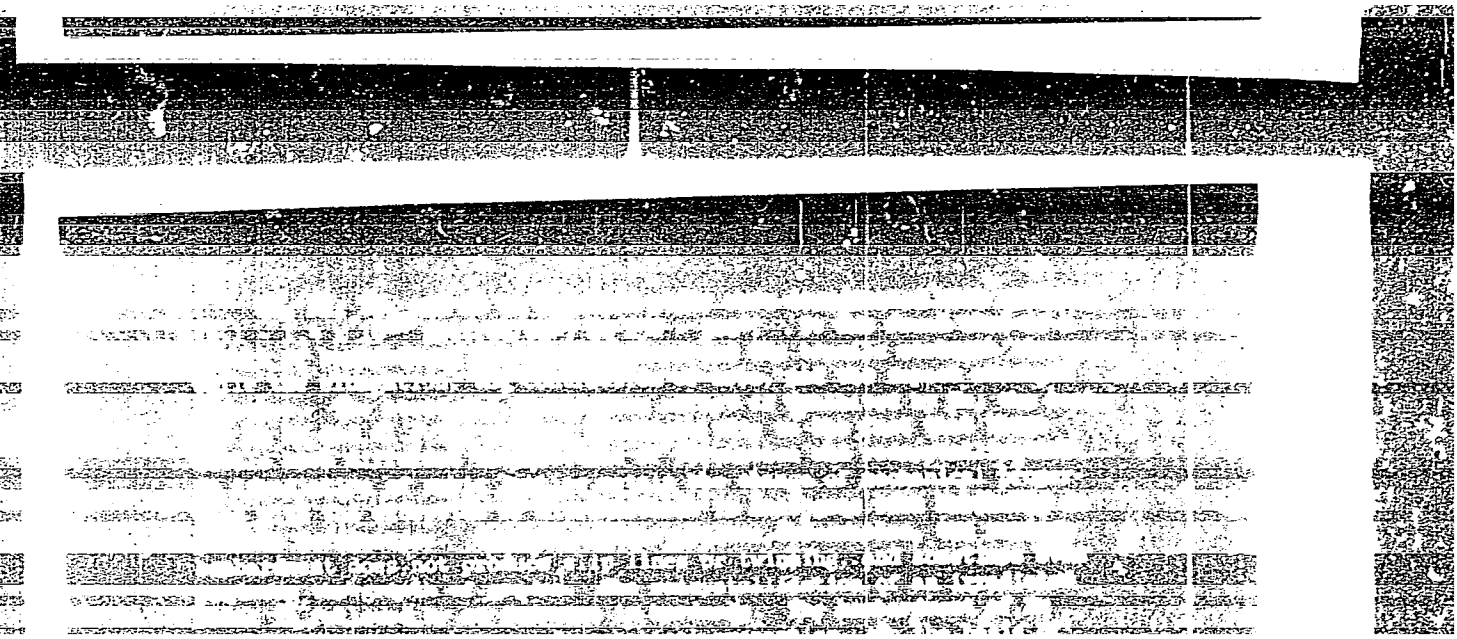
(Radioactive substances) (Radiation)

PRAVDYUK,N.F., kandidat nauk

[Metallographic "hot" laboratory] Metallovedcheskaia "goriachaia" laboratoriia; doklady, predstavlennye SSSR na Mezhdunarodnuiu konferentsiiu po mirnomu ispol'zovaniiu atomnoi energii. Moskva, 1955. 24 p. [Microfilm] (MIRA 9:3)

1. Nachal'nik laboratorii.
(Metallurgical laboratories)





PRAVDYUK, N. F.

PRAVDYUK, N. F. and KONOBEYEVSKIY, S. I.

"Change in Mechanical Properties of Structural Materials Under Neutron Irradiation."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sep 58.

PRAVDYUK, M. F.

"On Some Physico-Chemical Processes Occurring in Fissionable Materials Under the Influence of Irradiation", by K. P. Dubrovin, S. T. Konobeyevsky, B. M. Levitsky, L. D. Panteleyev, and M. F. Pravdyuk.

Report presented at 2nd UN Atoms-for-Peace Conference, Geneva, 9-13 Sept 1958

PRAVDYUK, N. F.

AUTHORS: Konobeyevskiy, S. T., Pravdyuk, N. F., Dubrovin, K. P., 89-1-4/29
Levitskiy, B. M., Panteleyev, L. D., Golyanov, V. M.

TITLE: Investigations of Structural Changes Occurring in an Uranium-Molybdenum Alloy by Neutron Irradiation. (Issledovaniye strukturnykh izmeneniy, proiskhodyashchikh v splave urana s molibdenom pod deystviyem neytronnogo obluchcheniya).

PERIODICAL: Atomnaya Energiya, 1958, Vol. 4, Nr 1, pp. 34-44 (USSR).

ABSTRACT: An U + Mo alloy with 7.05 weight percents of Mo is produced in a vacuum induction furnace. The melting charge is rolled out in a warm and cold state until a thickness of 0,1 mm is attained. From these foils the samples for measuring resistance and for radiographic investigations are produced. Before irradiation with neutrons, the samples are subjected to a homogenizing process of annealing (in the vacuum) at a temperature of 1000°C for three hours, after which they were cooled in the air.
After irradiation by neutrons the electric resistance was measured and the structure of the alloys was investigated radiographically and under the microscope.
The thermal treatment described made it possible to obtain samples

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Investigations of Structural Changes Occurring in an Uranium-Molybdenum Alloy by Neutron Irradiation.

with the structure of an eutectoid $\alpha + \gamma'$, which has different sizes of grain.
It was found that the diffusion velocity leading to a homogenization under the influence of irradiation in the annealed samples is inversely proportional to the square of the size of grain.
In the homogeneous sample (γ - phase) irradiation causes a modification of properties and of structure, and already within a period of from 2 - 4 hours a maximum of effect is attained. This may be imagined to be something like "irradiation incandescence". In the γ - phase also a re-orientation with transitions to a cubic lattice has been observed. This phenomenon occurs already during the first hours of exposure.
The size of the domain of the thermal peak and the energy liberated was determined at $2.5 \cdot 10^{-17}$ cm^3 and $\sim$ 2 MeV. These values are lower than those computed theoretically according to reference 2.
There are 13 figures, 4 tables, and 4 references, 3 of which are Slavic.

SUBMITTED: September 11, 1957.

AVAILABLE: Library of Congress.

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SOV/89-5-1-1/28

AUTHORS: Bochvar, A. A., Konobeyevskiy, S. T., Zaymovskiy, A. S., Sergeyev, G. Ya., Kutaytsev, V. I., Pravdyuk, N. F., Levitskiy, B. M.

TITLE: Investigations Carried out in the Field of the Metallography of Plutonium, Uranium, and Their Alloys (Issledovaniya v oblasti metallovedeniya plutoniya, urana i ikh splavov)

PERIODICAL: Atomnaya energiya, 1958, Vol. 5, Nr 1, pp. 5-23 (USSR)

ABSTRACT:

ABSTRACTS: The purpose of this survey is to study the metallography of nuclear fuels: plutonium, uranium, and their alloys. The work concerned was carried out in connection with the development of atomic power engineering in the USSR. Three principal chapters contain data concerning the following subjects:

1.) Plutonium and its alloys:
   a) Metallic plutonium
   b) Alloys with the metals of group I ($PuCu_2$, $PuCu_4$, $PuCu_6$)
   c) Alloys with the metals of group II ($PuBe_{13}$)
   d) Alloys with the elements of group III (Pu_3Al, $PuAl_2$, $PuAl_3$, $PuAl_4$)

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e) Alloys with the elements of group IV (Pu_6Zr)
f) Alloys with the elements of group V-VIII (PuV_2, $PuOs_2$, $PuFe_2$)
g) Alloys with the metals of actinides (PuU)

2.) Uranium and its alloys:
a) Structure and physical properties of uranium
b) Mechanic properties of coarse-grained uranium
c) Deformation of uranium when subjected to irradiation or cyclic thermal treatment
d) Change of the structure and properties of uranium as a result of thermal treatment (annealing)
e) Change of the structure and properties of uranium as a result of plastic deformation followed by annealing at temperatures of the α-range
f) Structure and properties of uranium alloys
g) Treatment of uranium by means of pressure.

3.) The influence exercised by neutron radiation upon the structure and the properties of reactor building materials and fuels. There are 17 figures, 6 tables, and 6 references, which are Soviet.

Card 2/3

Submitted Mar. '58

21(4) PHASE I BOOK EXPLOITATION SOV/2714

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958

Doklady sovetskikh uchenykh; yadernoye goryucheye i reaktornyye metally. (Reports of Soviet Scientists; Nuclear Fuel and Reactor Metals) Moscow, Atomizdat, 1959. 670 p. (Series: Its: Trudy, vol. 3. 8,000 copies printed.

Ed. (Title page): A.A. Bochvar, Academician, A.P. Vinogradov, Academician, V.S. Yemel'yanov, Corresponding Member, USSR Academy of Sciences, and A.P. Zefirov, Doctor of Technical Sciences; Ed. (Inside book): V.V. Pereversev and G.M. Pchelintseva; Tech. Ed.: E.I. Mazel'.

PURPOSE: This volume is intended for scientists, engineers, physicians, and biologists working in the production and peaceful application of atomic energy; for professors and students of schools of higher technical education where the subject is taught; and for people interested in atomic science and technology.

COVERAGE: This is volume 3 of a 6-volume set of reports on atomic energy, presented by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy, held in Geneva from September 1 to 13, 1958. Volume 3 consists of two parts. The first part, edited by A.I. Zubov, is devoted to geology, prospecting, concentration and processing of nuclear source material. The second part, edited by G.L. Zverev, includes 27 reports on metallurgy, metallography, processing technology of nuclear fuels and reactor metals, and neutron irradiation effects on metals. The titles of the individual papers in most cases correspond word for word with those in the official English language edition on the Conference proceedings. See SOV/2081 for the titles of the other volumes of the set.

Card 10/11

PRAVDYUK, N.F.

PRAVDYUK, N.F.; NIKOLAYENKO, V.A.; KARPUKHIN, V.I.

[Changes in the parameters of diamond and silicon carbide due to irradiation] Izmenenie parametrov almaza i karbida krenniia pri obluchenii. Moskva, In-t atomnoi energii, 1960. 10 p. (MIRA 16:12)
(Crystals, Effect of radiation on)

PRAVDYUK, N.F.; KUZNETSOV, V.N.; LALETIN, N.I.

[Isothermal irradiation of nonfissionable materials inside the fuel assemblies of reactors for physical and technological research] Izotermicheskoe obluchenie nedeliashchikhsia materialov vnutri teplovydeliaiushchikh sborok RFT. Moskva, In-t atomnoi energii AN SSSR, 1960. 15 p. (MIRA 16:12)
(Nuclear reactors)

IVANOV, A.N.; PRAVDYUK, N.F.

[Measuring the electric resistance of molybdenum during irradiation in a reactor for physical and technological research] Izmerenie elektrosoprotivleniia molibdena v protsesse oblucheniia v reaktore RFT. Moskva, In-t atomnoi energi AN SSSR, 1960. 18 p. (MIRA 16:12)
(Molybdenum--Electric properties)
(Nuclear reactors)

IVANOV, A.N.; PRAVDYUK, N.F.

[Effect of neutron irradiation on the electric resistance of certain metals] Vliianie neitronnogo obluchenila na elektrosoprotivlenie nekotorykh metallov. Moskva, In-t atomnoi energii im. I.V.Kurchatova, 1960. 23 p. (MIRA 16:12)
(Neutrons)
(Metals, Effect of radiation on)

S/089/60/009/005/003/020
B006/B070

21.4230

AUTHORS: Pravdyuk, N. F., Kuznetsov, V. N., Laletin, N. I.

TITLE: Isothermal Irradiation of Non-fissile Materials in the РФТ (RFT) Reactor by Means of Calorimetric Devices

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 5, pp. 380 - 386

TEXT: The present paper is concerned with the determination of heat produced by absorption of radiation in a multi-component non-fissile medium. The medium is exposed to the entire spectrum of gamma rays appearing in the active zone of a reactor. Some theoretical considerations are discussed and some formulas given for the heat (q_γ) produced on absorption of the gamma radiation. Next, the calorimeter is described which is used in the RFT reactor; and the temperature distribution determined by it is given. A steady method for the determination of $q = q_\gamma + q_n$ (per mass unit) is described. The q values for some materials are given as measured in the center of the active zone inside the RFT fuel assembly (10 Mw):

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85560

Isothermal Irradiation of Non-fissile Materials in the PΦT (RFT) Reactor by Means of Calorimetric Devices

S/089/60/009/005/003/020
B006/B070

Material	Sample diameter [mm]	q	q_n	q_γ	[w/g]
Aluminum	13.5	2.3±0.4	0.22	2.08	
Steel 30	13.5	2.2±0.4	0.35	1.85	
Tin	10	3.1±0.5	0.012	3.088	
Lead	10	3.7±0.6	0.014	3.686	

Further, the mass absorption coefficient of the gamma energy as a function of the atomic number (Fig.3), and the Z-dependence of $(\bar{\mu}_{en}/\varrho)f(\bar{\mu}_{en},d)$ for different values of $\bar{\mu}_{en}d$ (Fig.4) are measured. The q value is a cosine function of the distance from the central line in the reactor core. Fig.5 shows the curves for reactor powers of 5, 7, and 10 Mw. The results of the investigations are summarized as follows: 1) q in w/g of an arbitrary multi-component material can be determined if the gamma spectrum of the reactor and the q value of an arbitrary simple substance are known. 2) If the gamma radiation in a reactor is sufficiently intense, isothermal irradiation of samples of non-fissile

Card 2/4

Isothermal Irradiation of Non-fissile Materials in the PŞT (RFT) Reactor by Means of Calorimetric Devices

S/089/60/009/005/003/020
B006/B070

materials in a reactor at temperatures above the coolant temperature up to 400-600°C can be achieved with an accuracy of ~ ±30°C by means of special caskets with insulated intermediate layers of air. 3) The method can be applied also to irradiate small samples of fissile material. 4) More accurate values of temperature can be obtained if the casket is displaced along a horizontal hole, and the change in radiation intensity is used for the determination of the temperature (see Fig.5).

V. A. Sidorenko is thanked for discussions. There are 5 figures, 1 table, and 5 references: 3 Soviet and 1 US.

SUBMITTED: November 9, 1959

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85560

S/089/60/009/005/003/020
B006/B070

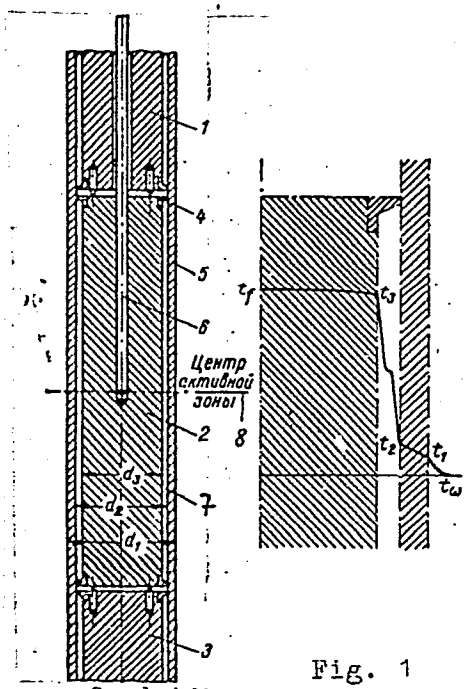

Fig. 1

Legend to Fig.1:
Scheme of the calorimeter and the character of temperature distribution. t_f - temperature at the center of the casket; t_1, t_2, t_3 not checked. t_ω - temperature of cooling water.

1, 2, 3 are cylindrical caskets each 100 mm long, located in a tube (5) closed at the bottom and open at the top, 4 - contact fins, 5 - tube, 6 - thermocouples, 7 - air gap, 8 - core center.

Card 4/4

S/089/61/010/004/003/027
B102/B212

21.6200

AUTHORS: Pravdyuk, N. F., Pokrovskiy, Yu. I., Vikhrov, V. I.

TITLE: Effect of neutron bombardment on the internal friction of monocrystalline and polycrystalline zinc

PERIODICAL: Atomnaya energiya, v. 10, no. 4, 1961, 347-352

TEXT: N. F. Pravdyuk has already reported in a lecture (Second Atomic Conference at Geneva 1958) about investigations of internal friction and of the critical amplitude of the maximum tension σ_{cr} before and after neutron bombardment of metals, and also of the influence of the orientation of the basal plane (0001) to the longitudinal axis of monocrystalline zinc. The method and equipment used have also been described there. This paper publishes additional results which have been obtained with monocrystalline and polycrystalline zinc. (σ_{cr} is that value of the maximum tension amplitude, at which internal friction starts to be a function of the tension amplitude). The monocrystalline specimens showed the following orientations of the (0001) planes to the longitudinal axis: 15, 40, 66, 76, 86, and 88°;

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specimens with 15, 40, 76, and 86° orientation have been exposed to neutron radiation. The internal friction has been measured at transverse oscillations (300 cps) before and after neutron bombardments having integral fluxes of $3 \cdot 10^{16}$ and $1.5 \cdot 10^{19}$ n/cm^2 and at a ratio of fast to thermal neutrons of 1 : 10. The amplitude of the maximum tension has been calculated from the oscillation amplitude. The results are represented graphically. Fig. 1 shows the change of internal friction as a function of the tension amplitude of non-irradiated monocrystalline zinc at angles θ given above the curves; the figures given below are the values of σ_{cr}.

Fig. 2 shows the same for neutron-bombarded ($3 \cdot 10^{18}$ n/cm^2) monocrystals. Fig. 4 shows the change of the minimum internal friction of monocrystalline zinc as a function of the angle θ, and Fig. 5 shows the functions $\sigma_{cr}(\theta)$ - both for monocrystals before and after bombardment. The following numerical values have been obtained:

σ_{cr}	15°	40°	66°	76°	86°	88°
before bombardment	105	20	40	120	400	600
after bombardment ($3 \cdot 10^{18}$ n/cm^2)	200	100	-	200	500	-
after bombardment ($1.5 \cdot 10^{19}$ n/cm^2)	350	280	-	-	550	-

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The theoretical value is given as $\sigma_{cr} = 2\tau_{cr}/\sin 2\theta$, where $\tau_{cr} = \sigma_{cr}\cos\varphi\sin\theta$; τ denotes the tangential stress given by $(P/A)\cos\varphi\sin\theta$; and $P/A = \sigma_{cr}$. The notations are shown in Fig. 6: θ denotes the angle between the line of application of the force and the glide plane; φ represents the angle between the direction mm of a possible displacement in the glide plane and the axis of the specimen; nn denotes the normal on the glide plane. It has been found that the value of σ for bombarded specimens may be connected to the start of shift of dislocations along the basal plane. Fig. 7 shows $1/Q = f(\sigma)$ for non-irradiated (1) and irradiated (2) polycrystalline zinc; the irradiation has been done with $3\cdot10^{18}$ n/cm^2. The experimental curves are discussed in detail. One may imagine that the curves $1/Q = f(\sigma)$ consist of three sections: 1) $\sigma \leq \sigma_{cr}$; 2) $\sigma > \sigma_{cr}$; 3) $\sigma \gg \sigma_{cr}$. The first two sections are the parts with reproducible internal friction, and the third one is that with irreproducible friction. The authors thank S. T. Konobeyevskiy for discussions. There are 7 figures, 1 table and 1 Soviet-bloc reference.

SUBMITTED: November 14, 1960
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PRAVDYUK, N.F.; GOLYANOV, V.M.

[Electron microscope study of uranium fission] Elektronno-mikroskopicheskoe issledovanie deleniia urana. Moskva, In-t atomnoi energii im. I.V.Kurchatova Akad. nauk SSSR, 1962. 11 p. (MIRA 15:7)

(Electron microscopy) (Nuclear fission) (Uranium)

PRAVDYUK, N. F.

PHASE I BOOK EXPLOITATION SOV/6176

Konobeyevskiy, S. T., Corresponding Member, Academy of Sciences USSR, Resp. Ed.

Deystviye vadernykh izlucheniy na materialy (The Effect of Nuclear Radiation on Materials). Moscow, Izd-vo AN SSSR, 1962. 383 p. Errata slip inserted. 4000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk; Otdeleniye fiziko-matematicheskikh nauk.

Resp. Ed.: S. T. Konobeyevskiy; Deputy Resp. Ed.: S. A. Adasinskiy; Editorial Board: P. L. Gruzin, G. V. Kurdyumov, B. M. Levitskiy, V. S. Lyashenko (Deceased), Yu. A. Martynyuk, Yu. I. Pokrovskiy, and N. F. Pravdyuk; Ed. of Publishing House: M. G. Makarenko; Tech. Eds: T. V. Polyakova and I. N. Dorokhina.

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The Effect of Nuclear Radiation (Cont.) SOV/6176

PURPOSE: This book is intended for personnel concerned with nuclear materials.

COVERAGE: This is a collection of papers presented at the Moscow Conference on the Effect of Nuclear Radiation on Materials, held December 6-10, 1960. The material reflects certain trends in the work being conducted in the Soviet scientific research orginization. Some of the papers are devoted to the experimental study of the effect of neutron irradiation on reactor materials (steel, ferrous alloys, molybdenum, avial, graphite, and nichromes). Others deal with the theory of neutron irradiation effects (physico-chemical transformations, relaxation of internal stresses, internal friction) and changes in the structure and properties of various crystals. Special attention is given to the effect of intense γ-radiation on the electrical, magnetic, and optical properties of metals, dielectrics, and semiconductors.

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PRAVDYUK, N. F.; GOLYANOV, V. M.

"Electronnomikroskopicheskoe Issledovaniye Deleniya Urana"
Report presented at the Symposium on Radiation Damage in Solids and Reactor Materials (IAEA) Venice, 7-11 May 1962

(Note: Figures 2-17 not included)

PRAVDYUK, N. F.; IVANOV, A. N.

"Vliyaniye Neitronnovo Oblucheniya Na Elektrosoprotivleniye Nekotorikh Metalov"
Report presented at the Symposium on Radiation Damage in Solids and Reactor Materials (IAEA) Venice, 7-11 May 1962.

(Note: Page 16 missing)

"Effects of Neutron Bombardment on the Electrical Resistance of Certain Metals."

L 4037-66 EWP(e)/EWT(m)/EPF(c)/EWP(i)/EPF(n)-2/EWP(t)/EWP(b) IJP(c) JD/GG/GS/
ACCESSION NR: AT5023797 WH UR/0000/62/000/000/0184/0188 62 61 B+1

AUTHOR: Pravdyuk, N. F.; Nikolayenko, V. A.; Karpukhin, V. I. 15 19

TITLE: Changes in the lattice constants of diamond and silicon carbide on irradiation 27 27 27

SOURCE: Soveshchaniye po probleme Deystviye yadernykh izlucheniy na materialy. Moscow, 1960. Deystviye yadernykh izlucheniy na materialy (The effect of nuclear radiation on materials); doklady soveshchaniya. Moscow, Izd-vo AN SSSR, 1962, 184-188

TOPIC TAGS: diamond, silicon carbide, lattice parameter, thermal neutron, radiation effect, neutron irradiation

ABSTRACT: An attempt was made to follow the changes induced in diamond and silicon carbide by thermal neutrons in an RFT reactor. Two ampoules receiving 8×10^{18} and 1.2×10^{20} n/cm^2 respectively were used. X-ray diffraction was carried out on a URS-50-I 14 unit in an RKU-114 19 camera. 10 The dependence of the silicon carbide lattice on the integrated neutron flux was plotted. From data on the expansion of SiC and diamond lattices, the distribution of integral neutron fluxes over the height of the reactor channel was determined. Combined with annealing treatment, the x-ray diffraction analysis yielded information on

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integrated fluxes and on the temperature at which the irradiation was carried out: it was found that the annealing of defects begins precisely at the temperature corresponding to the irradiation temperature. The activation of the materials under the influence of neutron radiation was nil, making it possible to conduct photographic x-ray studies. However, a complete perfection of the technique requires further experiments on irradiation of these materials at various temperatures and with various doses. "The installation of monitors for determining the integrated thermal neutron flux and subsequent calculations of the fluxes were carried out by junior research assistant V. N. Kuznetsov." Orig. art. has: 7 figures.

ASSOCIATION: None

SUBMITTED: 18 August 62 ENCL: 00 SUB CODE: SS, MT

NO REF SOV: 002 OTHER: 001

Card 2/2

PRAVDYUK, N.F.; POKROVSKIY, Yu.N.; PLATONOV, P.A.

Conference on the Effect of Radiation on Materials. Atom.energ. 13 no.6:608-609 D '62. (MIRA 15:12)
(Materials, Effect of radiation on—Congresses)

PRAVDYUK, N. F.

(5)

KONOBEYEVSKIY, S. T., PRAVDYUK, N. F., ASTRAKHANTSEV, S. M., KARPUKHIN, V. I., SKVORTSOV, V. V., NIKOLAYENKO, V. A.,

"Investigation of Certain Processes in UO_2 Dispersed in a Matrix"

Report submitted for the Conference on New Nuclear Materials Technology including Non-Metallic Fuel Elements (IAEA), Prague, 1-5 July 1963

AMAYEV, A. D.; PLATONOV, P. A.; PRAVDYUK, N. F.

"Study of tendency to brittleness of ferrite-pearlite steels for reactor vessels during neutron irradiation."

report submitted for 3rd Intl Cong, Peaceful Uses of Atomic Energy, Geneva, 31 Aug-9 Sep 64.